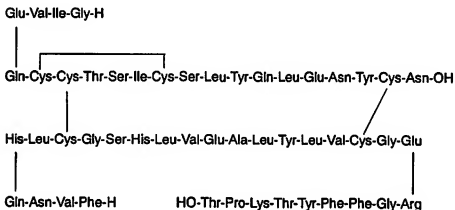


IN THE CLAIMS:

Kindly rewrite claims 1, 5 and 12 as follows. The status of all claims in the application is also set forth below.

1. (Currently Amended) An insulin-administering device for percutaneously or transmucosally administering insulin lispro represented by the structural formula indicated below or a pharmaceutically acceptable salt thereof (hereinafter referred to as “insulin lispro”), using iontophoresis and electroporation,



wherein said insulin lispro is dissolved, suspended, or dispersed in a hydrophilic matrix.

2. (Cancelled)

3. (Previously Presented) The insulin-administering device according to claim 1, wherein the electric current applied during iontophoresis is between 0.01 and 1.0 mA/cm².

4. (Previously Presented) The insulin-administering device according to claim 1, wherein the voltage applied during electroporation is between 1 V/cm and 10 kV/cm.

5. (Currently Amended) ~~The insulin-administering device according to claim 4,~~ An insulin administering device for percutaneous or transmucosally administering insulin lispro or a pharmaceutically acceptable salt thereof using iontophoresis and electroporation, wherein said device comprises a porous membrane for controlling the release of said insulin lispro and at least a pair of electrodes used for electroporation is disposed on the release-controlling porous membrane, and at least one of the electrodes used for electroporation is adapted to be applied directly on the skin or mucosa, or adjacent thereto, said device also comprising an electroporation-iontophoresis formulation containing insulin lispro, a reference formulation that is a counter electrode in iontophoresis, and a power supply connected to both formulations, wherein said insulin lispro is dissolved, suspended, or dispersed in a hydrophilic matrix, the electric current applied during iontophoresis is between 0.01 and 1.0 mA/cm², and the voltage applied during electroporation is between 1 V/cm and 10 kV/cm.

6. (Previously Presented) The insulin-administering device according to claim 5, wherein the hydrophilic matrix comprises one or more selected from the group consisting of agar, locust bean gum, xanthan gum, polyvinyl alcohols and derivatives thereof, and polyacrylic acid and salts thereof.

7. (Currently Amended) The insulin-administering device according to claim 1, wherein said device comprises a membrane for controlling the release of said ~~least one of the insulin lispros~~ lispro.

8. (Previously Presented) The insulin-administering device according to claim 7, wherein at least a pair of electrodes used for electroporation is disposed on the release-controlling membrane.

9. (Previously Presented) The insulin-administering device according to claim 7, wherein the release-controlling membrane is formed of a porous membrane.

10. (Currently Amended) ~~The insulin-administering device according to claim 7, An~~ insulin administering device for percutaneous or transmucosally administering insulin lispro or a pharmaceutically acceptable salt thereof (hereinafter referred to as "insulin lispro"), using iontophoresis and electroporation, wherein said insulin lispro is retained on the a membrane.

11. (Previously Presented) The insulin-administering device according to claim 10, wherein said insulin lispro is retained in a dry state on the membrane and in that a part or all of said insulin lispro is dissolved when it is used.

12. (Currently Amended) The insulin-administering device according to claim [[2]] 2 1, wherein at least one of the electrodes used for electroporation is adapted to be applied directly on the skin or mucosa, or adjacent thereto.

13. (Previously Presented) An insulin-administering device, wherein said device comprises an electroporation-iontophoresis formulation containing insulin lispro, a reference formulation that is a counter electrode in iontophoresis, and a power supply connected to both formulations.

14. (Previously Presented) The insulin-administering device according to claim 13, wherein the power supply has a connecting port used for iontophoresis and a connecting port used for electroporation.

15. (Previously Presented) An electroporation-iontophoresis formulation, wherein said formulation comprises a backing, an iontophoresis electrode disposed on the backing, an insulin lispro-containing layer which is disposed on the iontophoresis electrode and contains an insulin lispro, and electroporation electrodes which are disposed on the insulin lispro-containing layer and have polarities different from one another.

16. (Previously Presented) The electroporation-iontophoresis formulation according to claim 15 wherein a release-controlling membrane for controlling the release of said insulin lispro is provided between the insulin lispro-containing layer and the electroporation electrodes.

17. (Previously Presented) The electroporation-iontophoresis formulation according to claim 16, wherein the release-controlling membrane is a porous membrane having a pore size between 0.01 and 10 μm .

18. (Previously Presented) An electroporation-iontophoresis formulation, wherein said formulation comprises a backing, an iontophoresis electrode disposed on the backing, a hydrophilic matrix base disposed on the iontophoresis electrode, a liner disposed on the hydrophilic matrix base, a retaining membrane which is disposed on the liner and retains an insulin lispro, and electroporation electrodes which are disposed on the retaining membrane and have polarities different from one another.

19. (Previously Presented) The electroporation-iontophoresis formulation according to claim 18, wherein said insulin lispro is retained in a dry state on the retaining membrane.

20. (Previously Presented) The electroporation-iontophoresis formulation according to claim 15, wherein the electroporation electrodes are formed as a multipoint contact-type.